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MIPR NO: 92MM2539

TITLE: COMPARISON OF WORK OF BREATHING DURING MECHANICAL
VENTILATION USING ASSIST CONTROL AND INTERMITTENT
MANDATORY VENTILATION

PRINCIPAL INVESTIGATOR: Ronald K. Poropatich, M.D.

CONTRACTING ORGANIZATION: Walter Reed Army Medical Center
Washington, DC 20307-5001

REPORT DATE: July 19, 1994

TYPE OF REPORT: Final Report

PREPARED FOR: U.S. Army Medical Research, Development,
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REPLY TO
ATTENTION OF:

DEPARTMENT OF THE ARMY
WALTER REED ARMY MEDICAL CENTER
WASHINGTON, DC 20307-5001



HS HL-MP

19 July 1994

MEMORANDUM FOR US Army Medical R & D Command
ATTN: SGRD-RMI-S/Virginia Miller, Ft. Detrick,
Frederick, MD 21702-5102

SUBJECT: Final Report of MIPR 92 MM 2539

1. Refer to memo dated 24 August 1993, enclosure 1.
2. This memo pertains to the research period 15 March 1992 through 15 September 1993, for the subject MIPR, titled: Comparison of Work of Breathing During Mechanical Ventilation Using Assist Control and Intermittent Mandatory Ventilation.
3. During the study period, 2 patients were enrolled. Data from the study is uninterpretable due to the wide range in values which was unavoidable during the collection period. The experiment was unsuccessful from the onset with patients not tolerating the adjustments to the ventilator, culminating in patient-ventilator dyssynchrony and ultimately bad data. The instrument used to collect the data, the metabolic cart, was overly sensitive to these fluctuations in breathing changes and unreliable in the data results. The research effort was terminated after these failed attempts.
4. MIPR expenditures during the study period include:

| | | | |
|-----------|-----------|-----------|------------------|
| Personnel | \$ 857.00 | (Sept 92) | - Research Nurse |
| Equipment | \$7462.00 | (June 92) | - Computer |
| Supplies | \$ 490.00 | (Sept 92) | - Software |

| | |
|-------|-----------|
| Total | \$8809.00 |
|-------|-----------|
5. Allocated funding for the project included:

| | |
|----------|-------------|
| FY 1992: | \$32,521.00 |
| FY 1993: | \$16,667.00 |
6. There were no publications or manuscripts generated from the failed experiment.
7. It is regrettable that such a delay in generating this final report occurred. In addition, the memorandum format of this final

report, which deviates from normal procedures, was discussed with MAJ Bruttig, USAMRDC, Ft. Detrick, MD, who provided guidance and approval of this format.

A handwritten signature in cursive script, appearing to read 'R. Poropatich, M.D.', written in dark ink.

RONALD K. POROPATICH, M.D.
LTC, MC
Pulmonary & Critical Care
Medicine Service
Phone: 202-576-1745/6/7



REPLY TO
ATTENTION OF:

DEPARTMENT OF THE ARMY
WALTER REED ARMY MEDICAL CENTER
WASHINGTON, DC 20307-5001



COPY

24 Aug 93

MEMORANDUM FOR U.S. Army Medical R & D Command, Attn: SGRD-ACQ/Ms.
Jean Feldman, Ft. Detrick, Frederick, MD, 21702-5102

SUBJECT: Termination of MIPR 92MM2539

1. Request termination of MIPR 92MM2539, titled: Comparison of Work of Breathing During Mechanical Ventilation Using Assist Control and Intermittent Mandatory Ventilation.
2. Since initiation of the above study in March 1992, only 2 patients have been enrolled. Difficulties in enrollment has been due to patients not tolerating the various ventilatory settings, as well as the metabolic cart (which measures the exhaled carbon dioxide and oxygen consumption) having too large a range in measured variables. This latter fact may be related to the difficulties encountered in tolerating the ventilator changes.
3. In addition, there has been insufficient time to pursue research by this investigator due to the many taskings assigned for the Remote Clinical Communications System (RCCS); see enclosures. This is a project which began in December 1992, from the Office of the Surgeon General of the U.S. Army and is a form of telecommunications among physicians, involving much time and resources. Such efforts have culminated in this investigator deploying the RCCS to Somalia in February 1993, Germany and Croatia in May 1993, and this coming September 1993 at a military conference in Hungary. Other taskings included development of a poster and its presentation at 1 general meeting in May 1993 in Washington, DC as well as 2 upcoming scientific meetings in October and November 1993 (AUSA and AMSUS respectively). In addition to clinical duties in Pulmonary and Critical Care Medicine at Walter Reed Army Medical Center, no scientific work could be pursued on the above project.
4. In light of the on-going clinical and telemedicine demands placed upon this researcher, as well as the inherent difficulties enrolling patients and collecting data, request that the study be terminated.

R. Poropatich, MD

Ronald K. Poropatich, MD
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